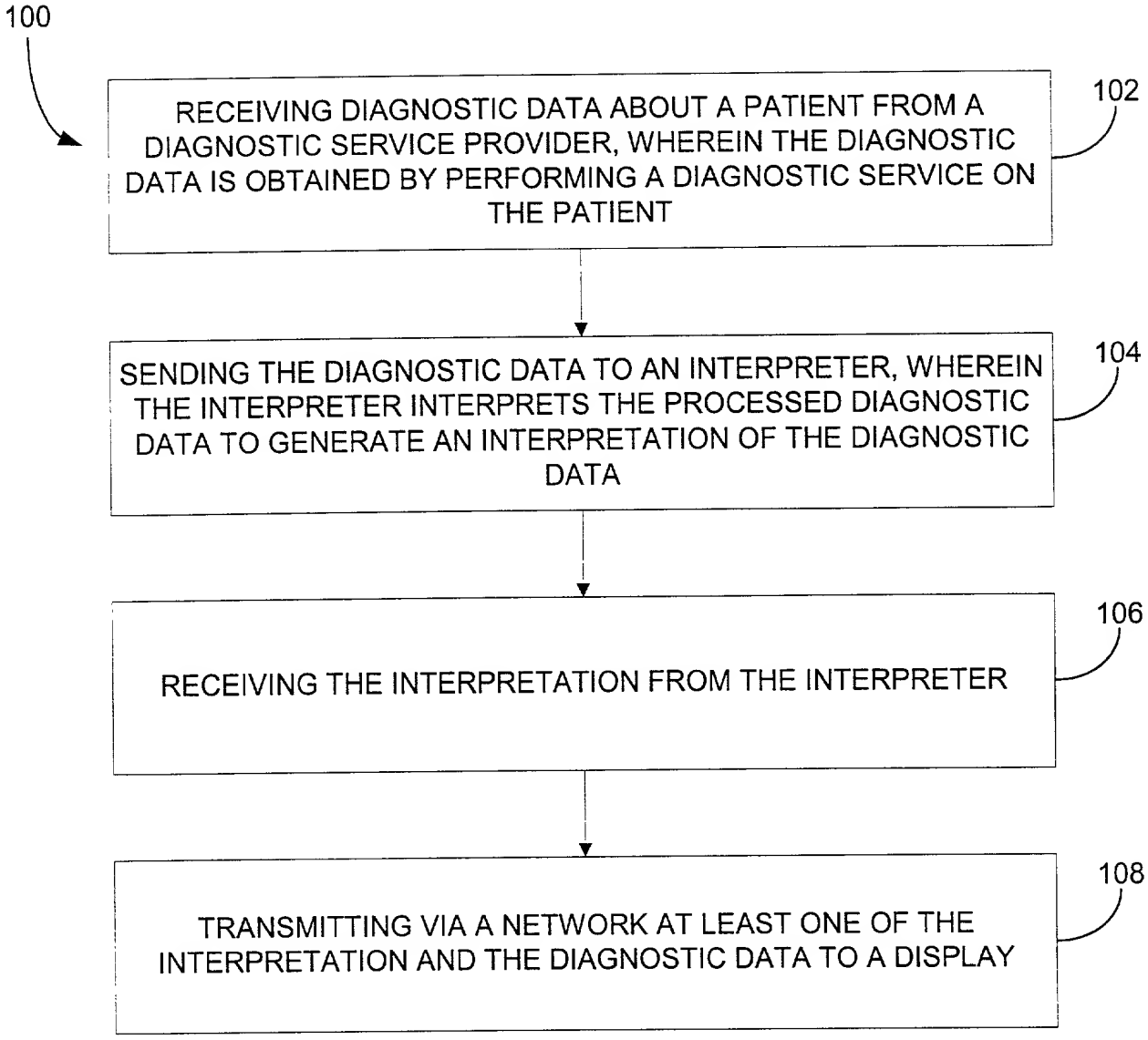

100
RECEIVING DIAGNOSTIC DATA ABOUT A PATIENT FROM A DIAGNOSTIC SERVICE PROVIDER, WHEREIN THE DIAGNOSTIC DATA IS OBTAINED BY PERFORMING A DIAGNOSTIC SERVICE ON THE PATIENT
102
SENDING THE DIAGNOSTIC DATA TO AN INTERPRETER, WHEREIN THE INTERPRETER INTERPRETS THE PROCESSED DIAGNOSTIC DATA TO GENERATE AN INTERPRETATION OF THE DIAGNOSTIC DATA
104
RECEIVING THE INTERPRETATION FROM THE INTERPRETER
106
TRANSMITTING VIA A NETWORK AT LEAST ONE OF THE INTERPRETATION AND THE DIAGNOSTIC DATA TO A DISPLAY
108

FIG. 1

Interactions with Patients & Physicians

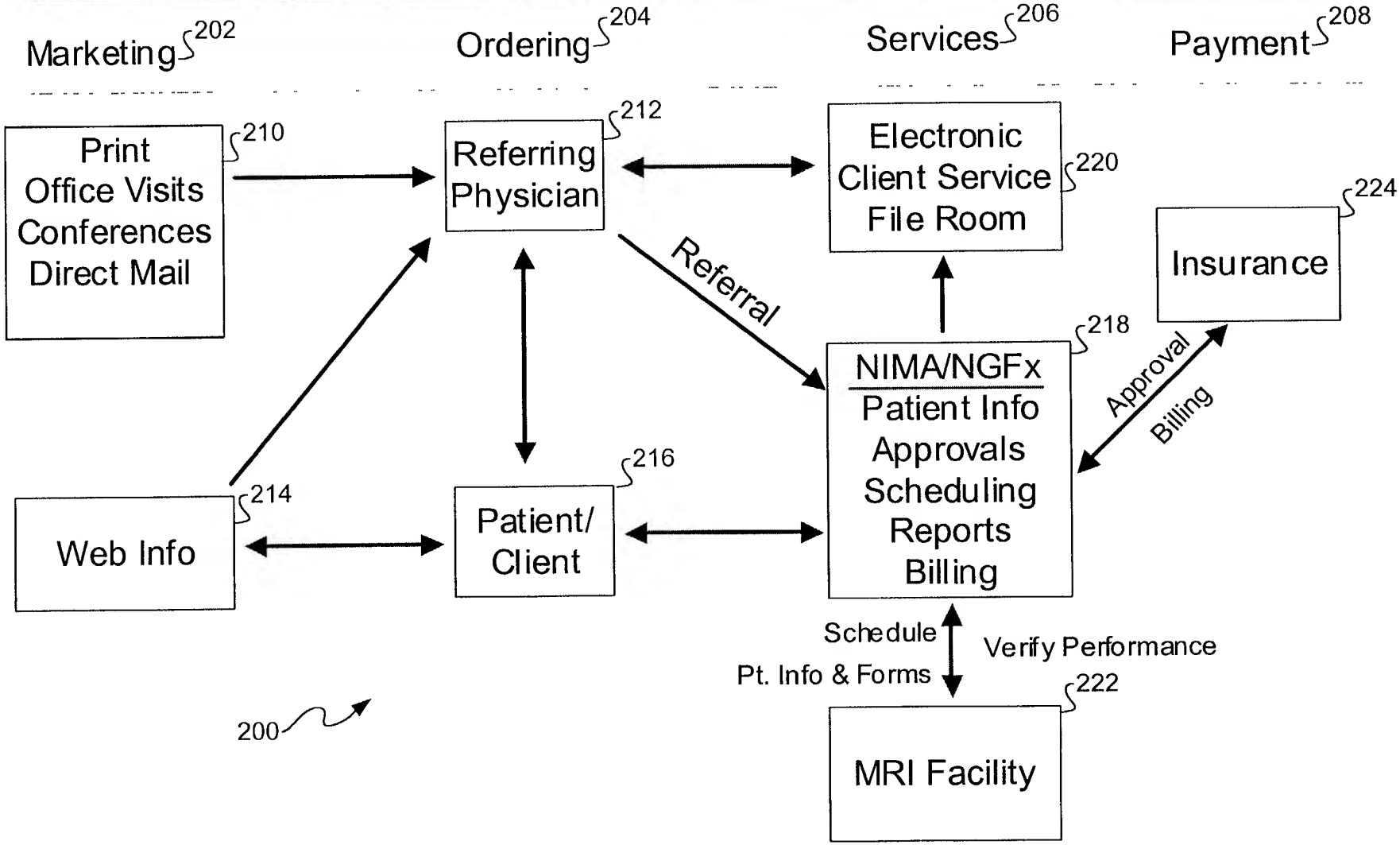


FIG. 2

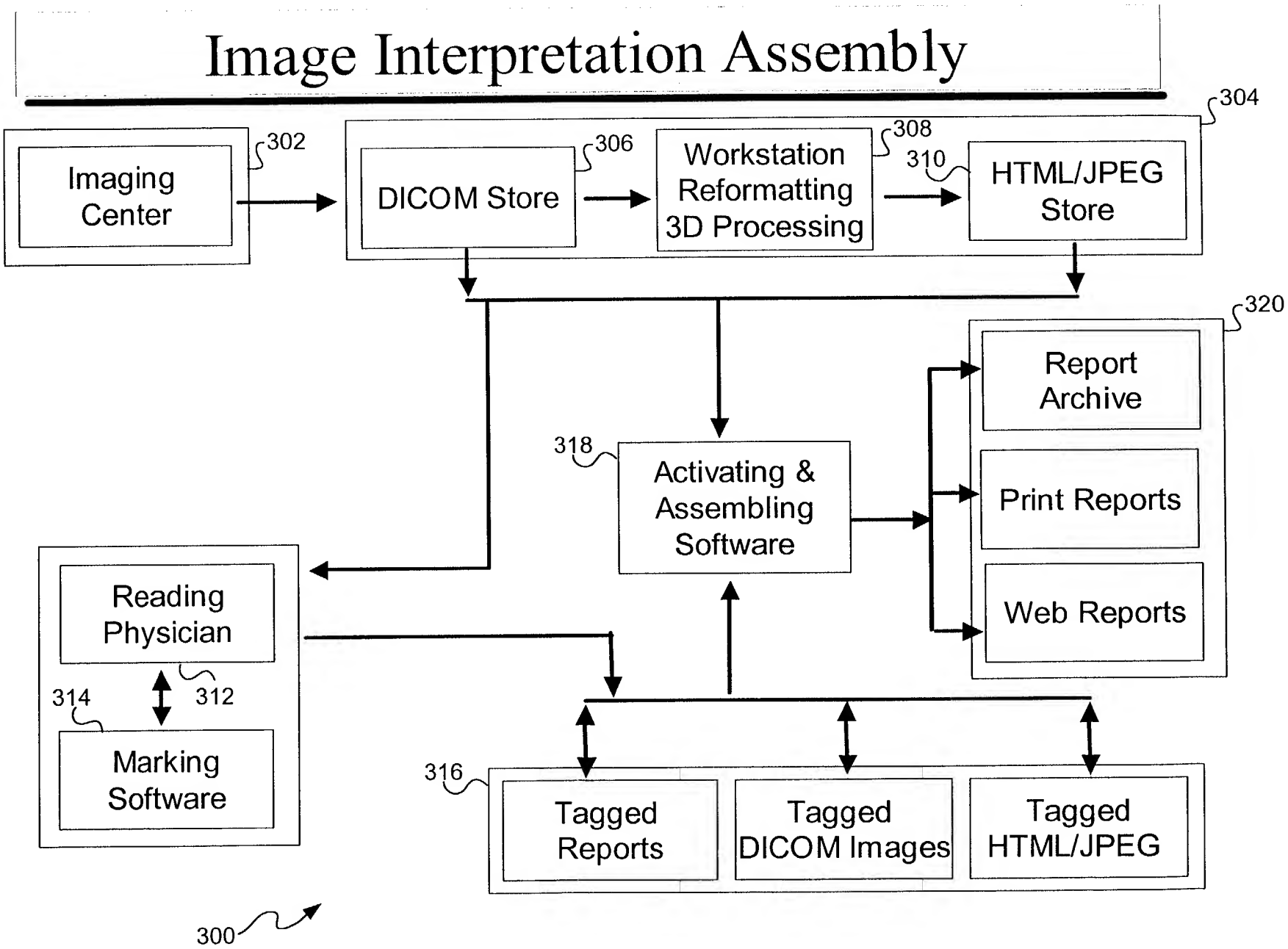


Image Interpretation Assembly
Imaging Center
302
DICOM Store
306
Workstation Reformatting 3D Processing
308
310
HTML/JPEG Store
304
320
Report Archive
Print Reports
Web Reports
318
Activating & Assembling Software
Reading Physician
312
314
Marking Software
316
Tagged Reports
Tagged DICOM Images
Tagged HTML/JPEG
300

FIG. 3

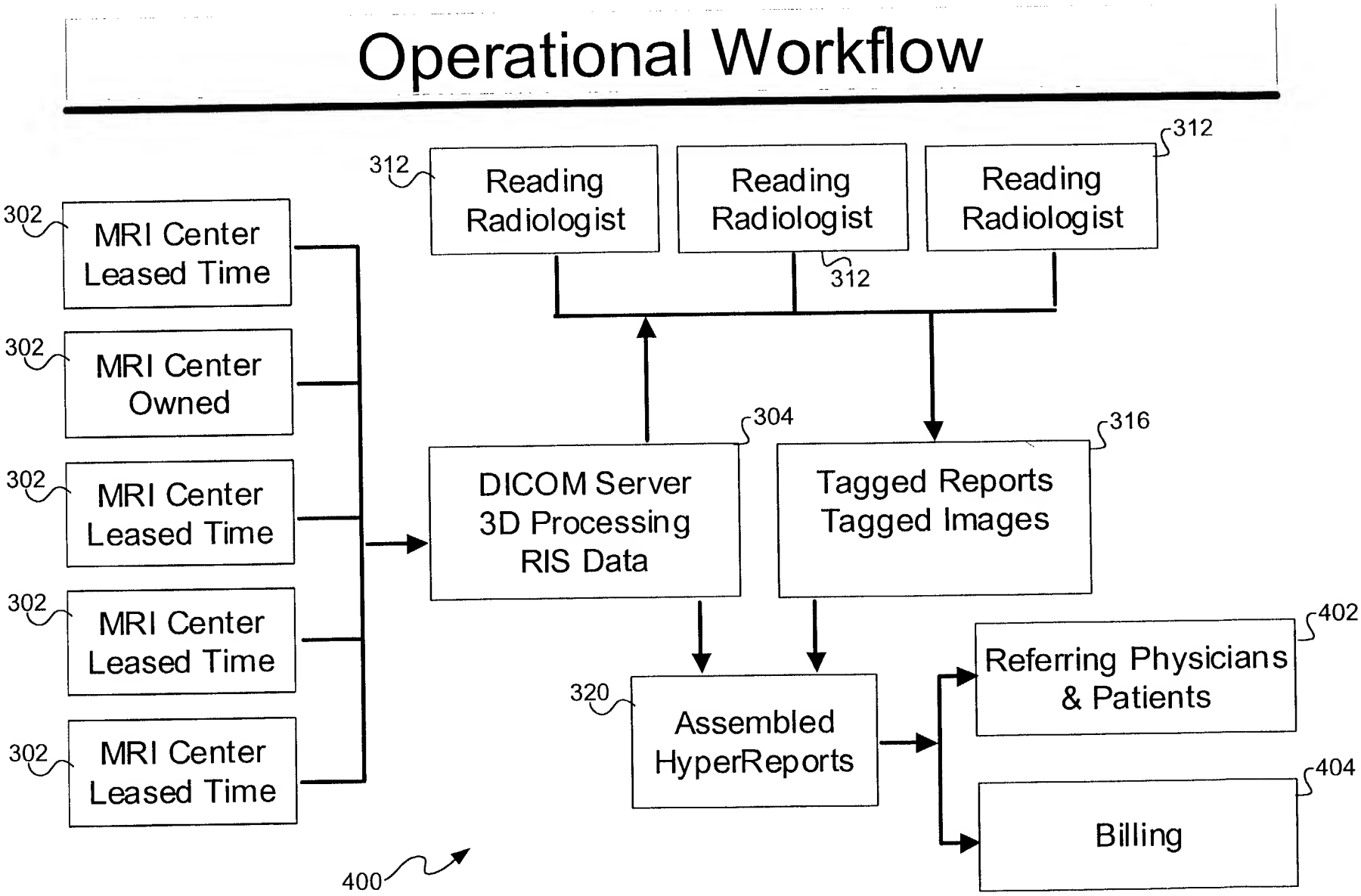

Operational Workflow
312
312
Reading Radiologist
Reading Radiologist
Reading Radiologist
312
302
MRI Center Leased Time
302
MRI Center Owned
302
MRI Center Leased Time
302
MRI Center Leased Time
302
MRI Center Leased Time
304
DICOM Server 3D Processing RIS Data
316
Tagged Reports Tagged Images
320
Assembled HyperReports
402
Referring Physicians & Patients
404
Billing
400

FIG. 4

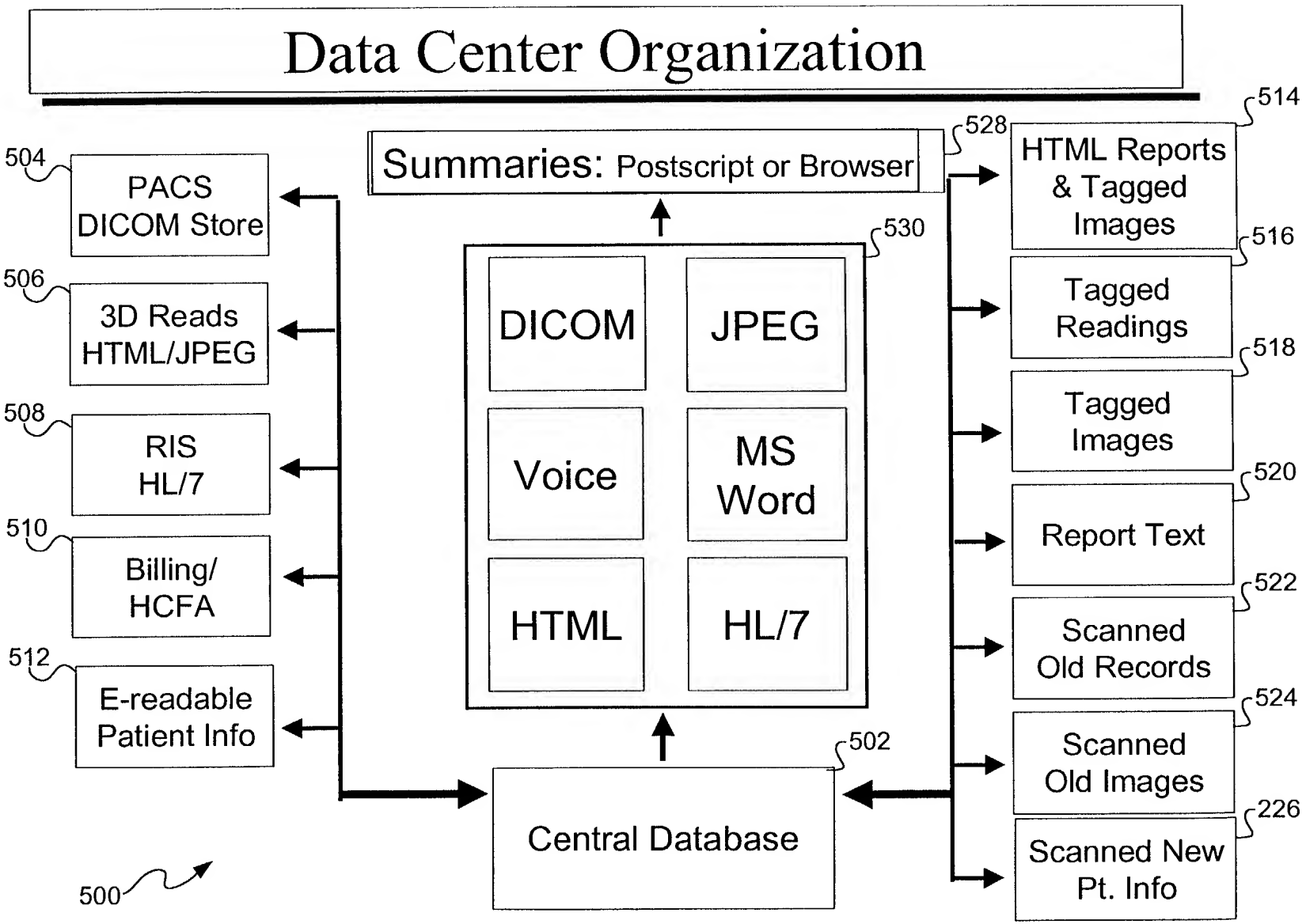

Data Center Organization
Summaries: Postscript or Browser
528
514
HTML Reports & Tagged Images
504
PACS DICOM Store
506
3D Reads HTML/JPEG
508
RIS HL/7
510
Billing/ HCFA
512
E-readable Patient Info
530
DICOM
JPEG
Voice
MS Word
HTML
HL/7
516
Tagged Readings
518
Tagged Images
520
Report Text
522
Scanned Old Records
524
Scanned Old Images
226
Scanned New Pt. Info
502
Central Database
500

FIG. 5

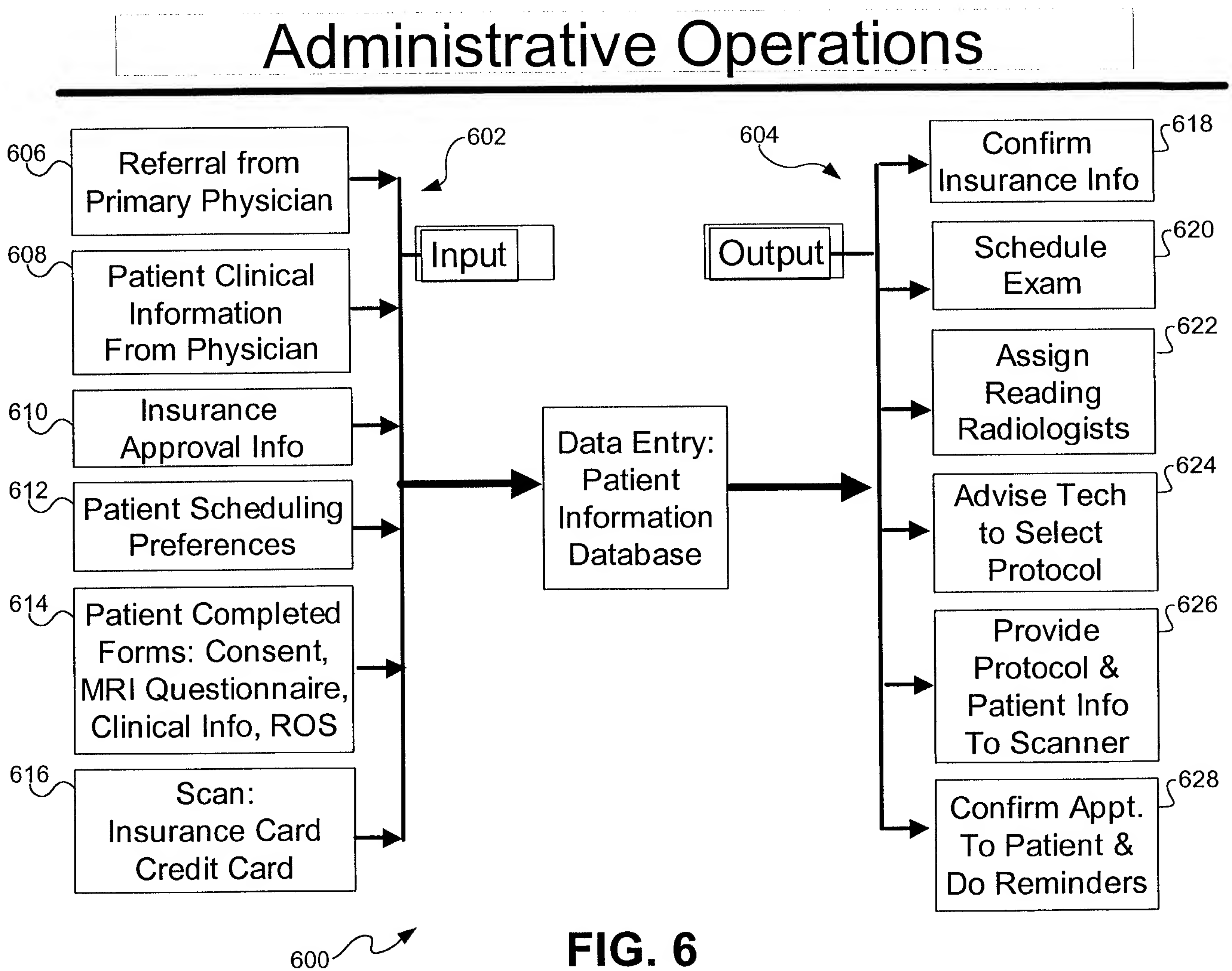

Administrative Operations
606
Referral from Primary Physician
608
Patient Clinical Information From Physician
610
Insurance Approval Info
612
Patient Scheduling Preferences
614
Patient Completed Forms: Consent, MRI Questionnaire, Clinical Info, ROS
616
Scan: Insurance Card Credit Card
602
Input
Data Entry: Patient Information Database
604
Output
618
Confirm Insurance Info
620
Schedule Exam
622
Assign Reading Radiologists
624
Advise Tech to Select Protocol
626
Provide Protocol & Patient Info To Scanner
628
Confirm Appt. To Patient & Do Reminders
600

FIG. 6

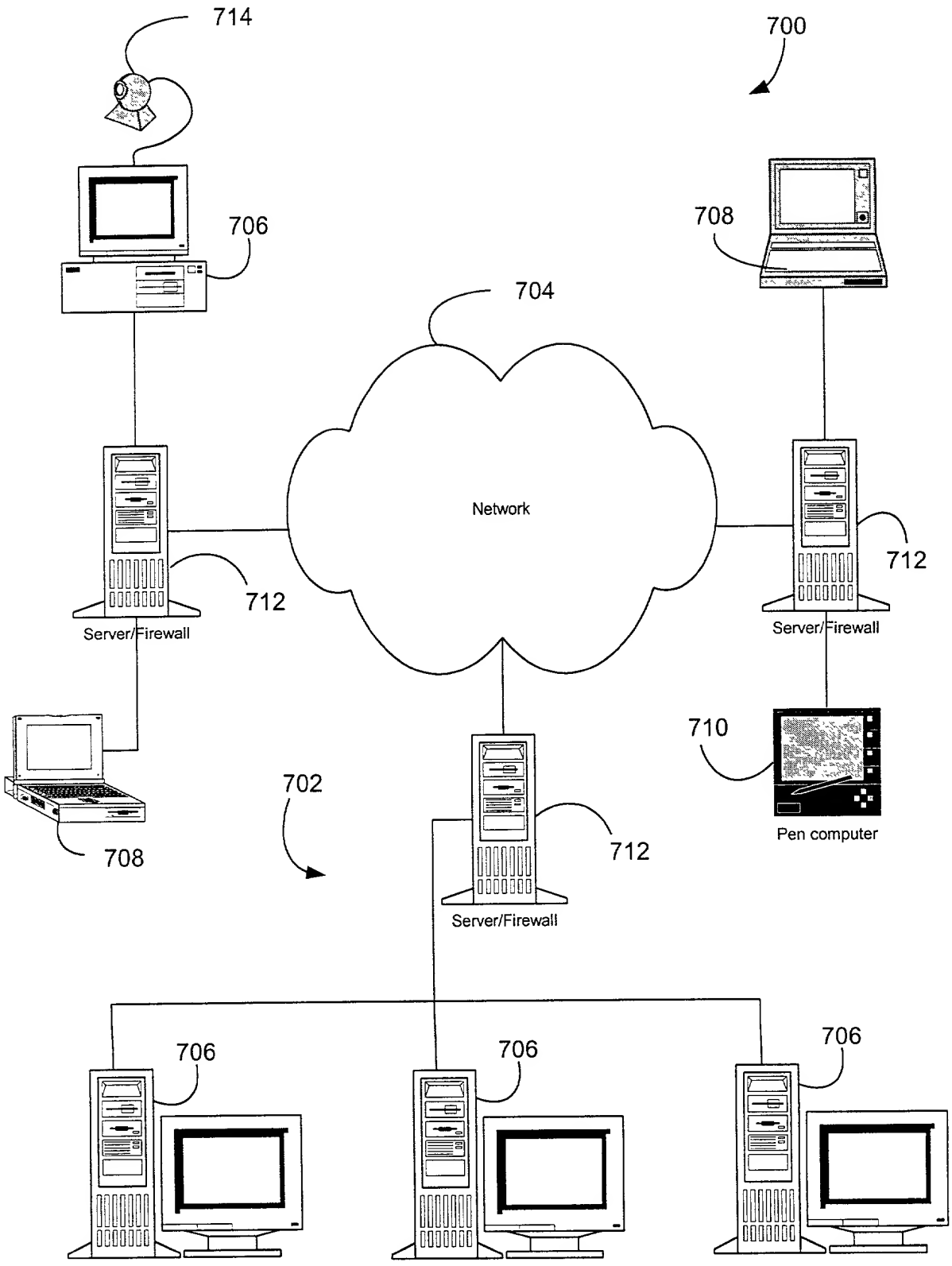

714
700
706
708
704
Network
712
Server/Firewall
712
Server/Firewall
710
Pen computer
708
702
712
Server/Firewall
706
706
706

FIG. 7

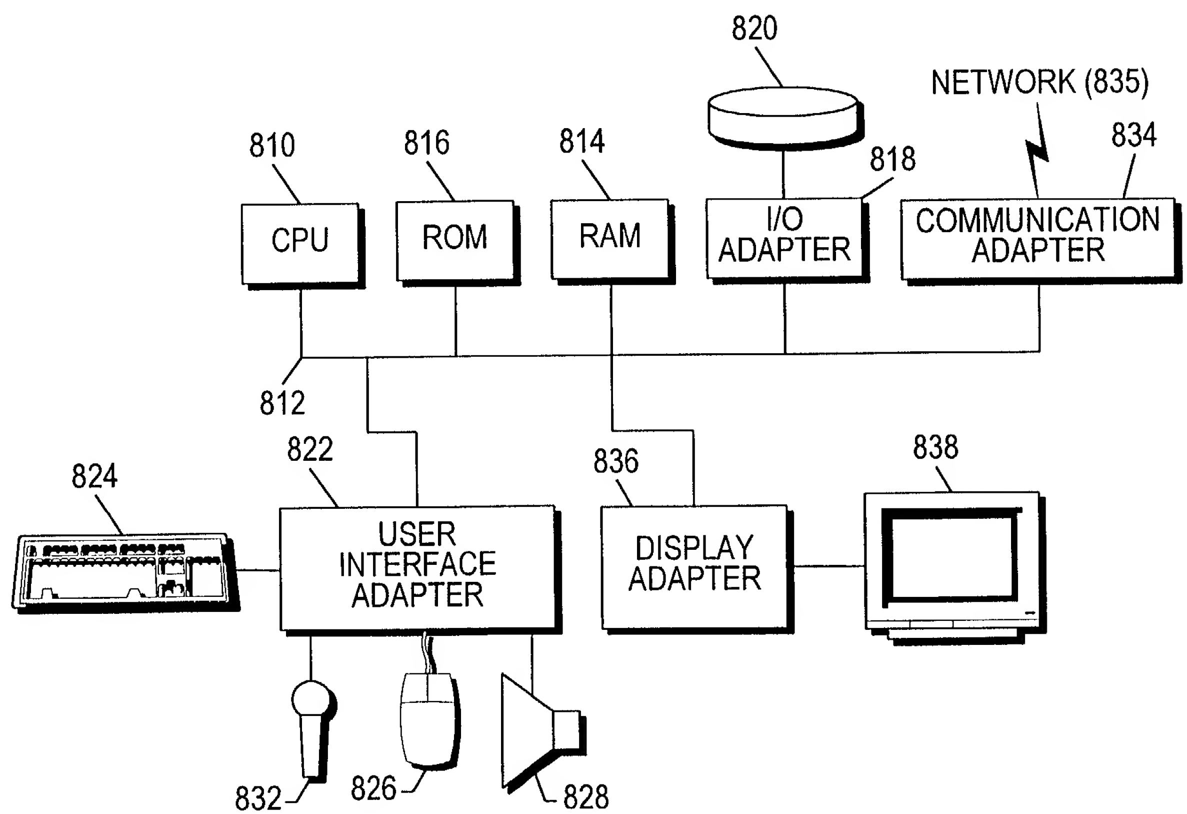

820
NETWORK (835)
810
816
814
818
834
CPU
ROM
RAM
I/O ADAPTER
COMMUNICATION ADAPTER
812
822
836
838
824
USER INTERFACE ADAPTER
DISPLAY ADAPTER
832
826
828

FIG. 8

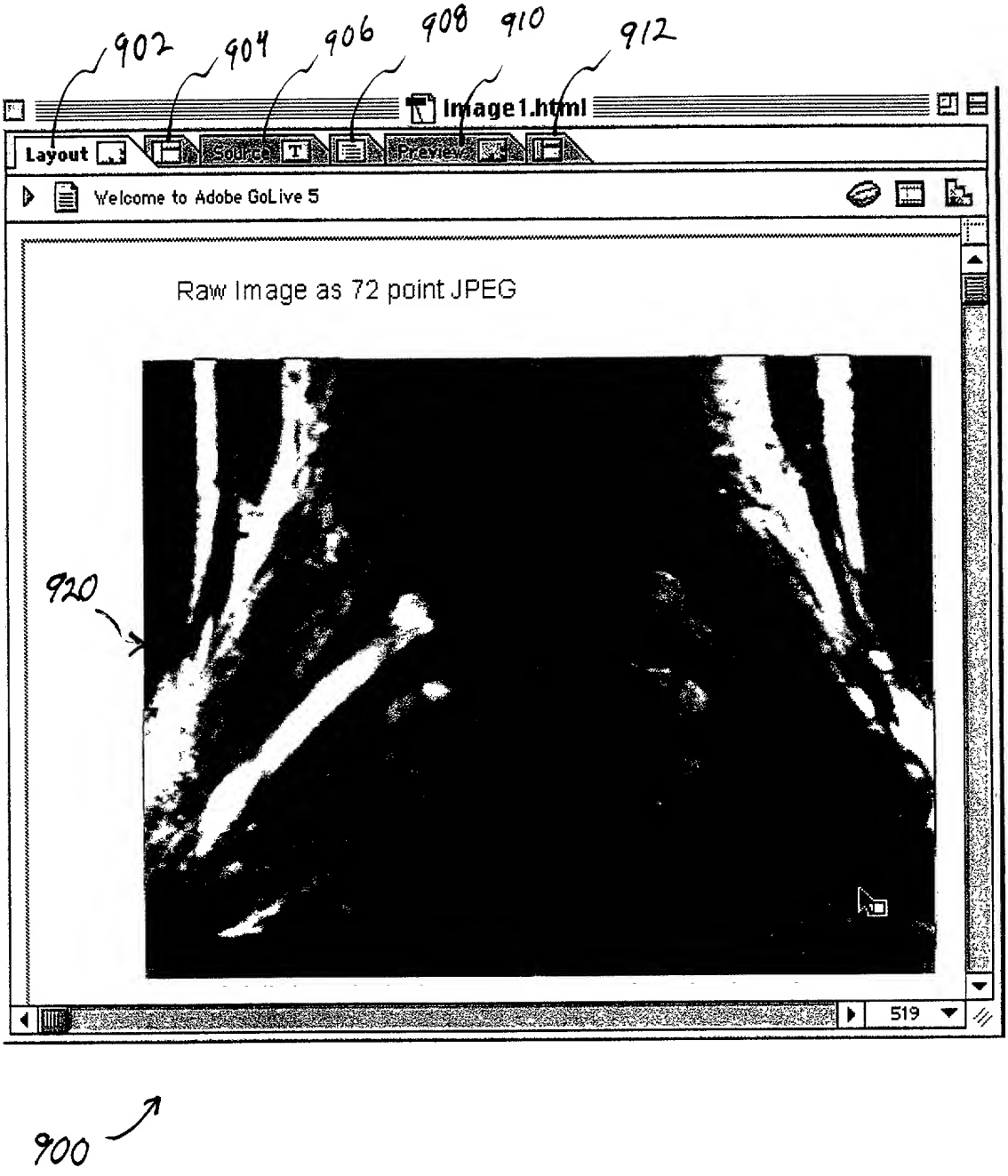

902
904
906
908
910
912
Image1.html
Layout
Source
Preview
Welcome to Adobe GoLive 5
Raw Image as 72 point JPEG
920
519
900

FIGURE 9

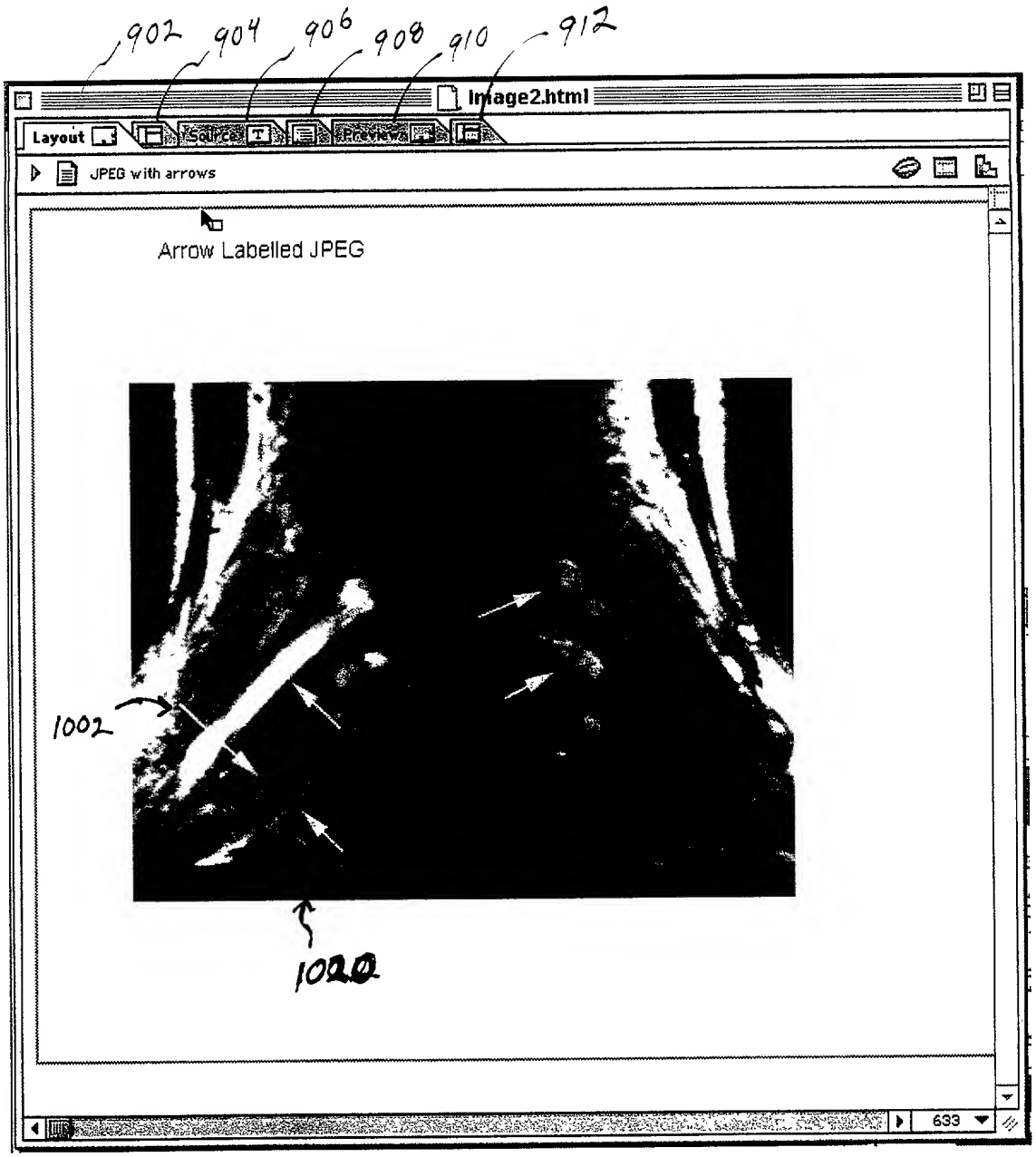
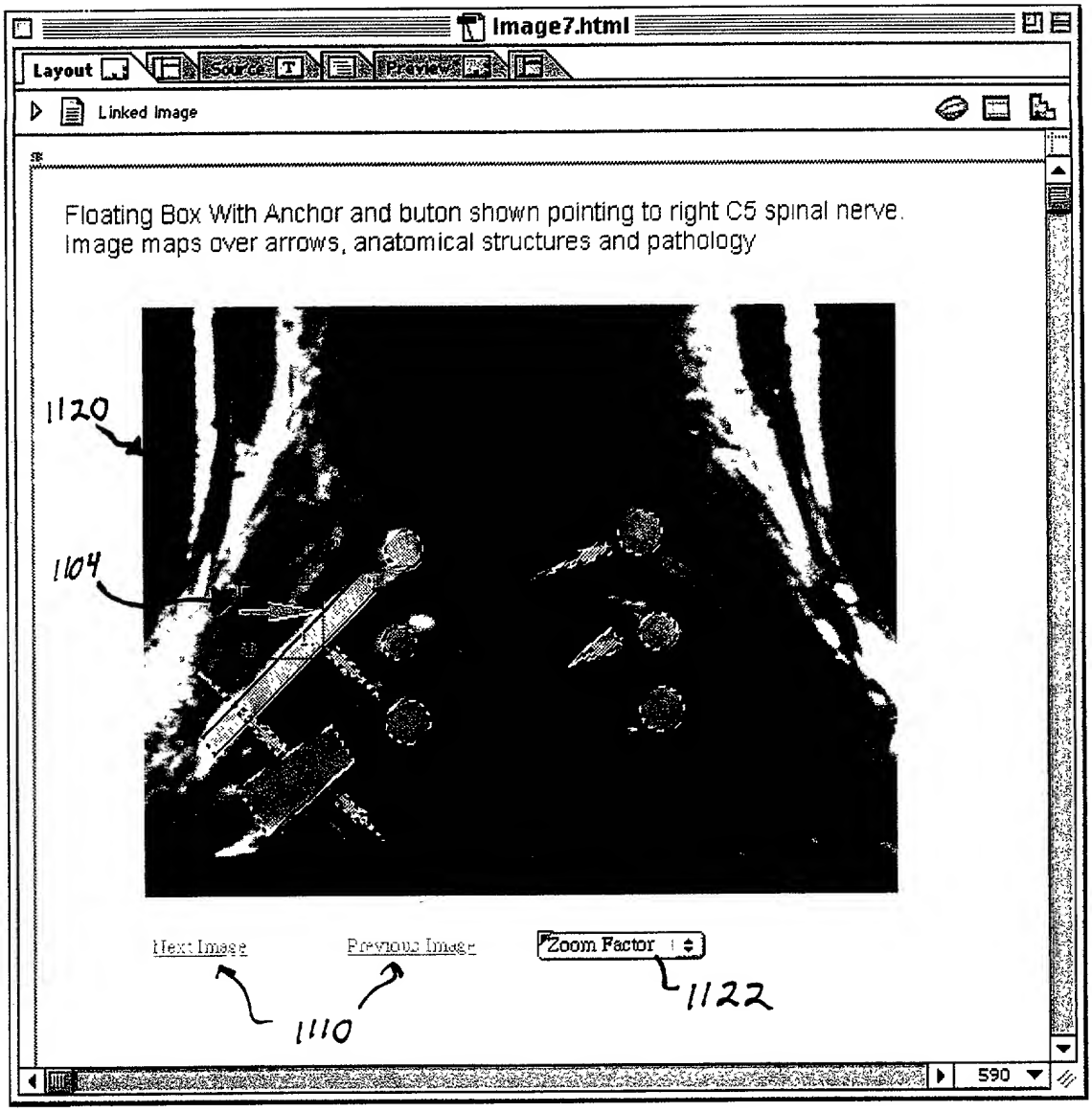

902
904
906
908
910
912
Image2.html
Layout
Source
Preview
JPEG with arrows
Arrow Labelled JPEG
1002
1020
633
1000

FIGURE 10



1100

FIGURE 11

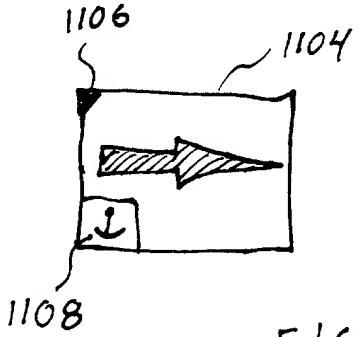
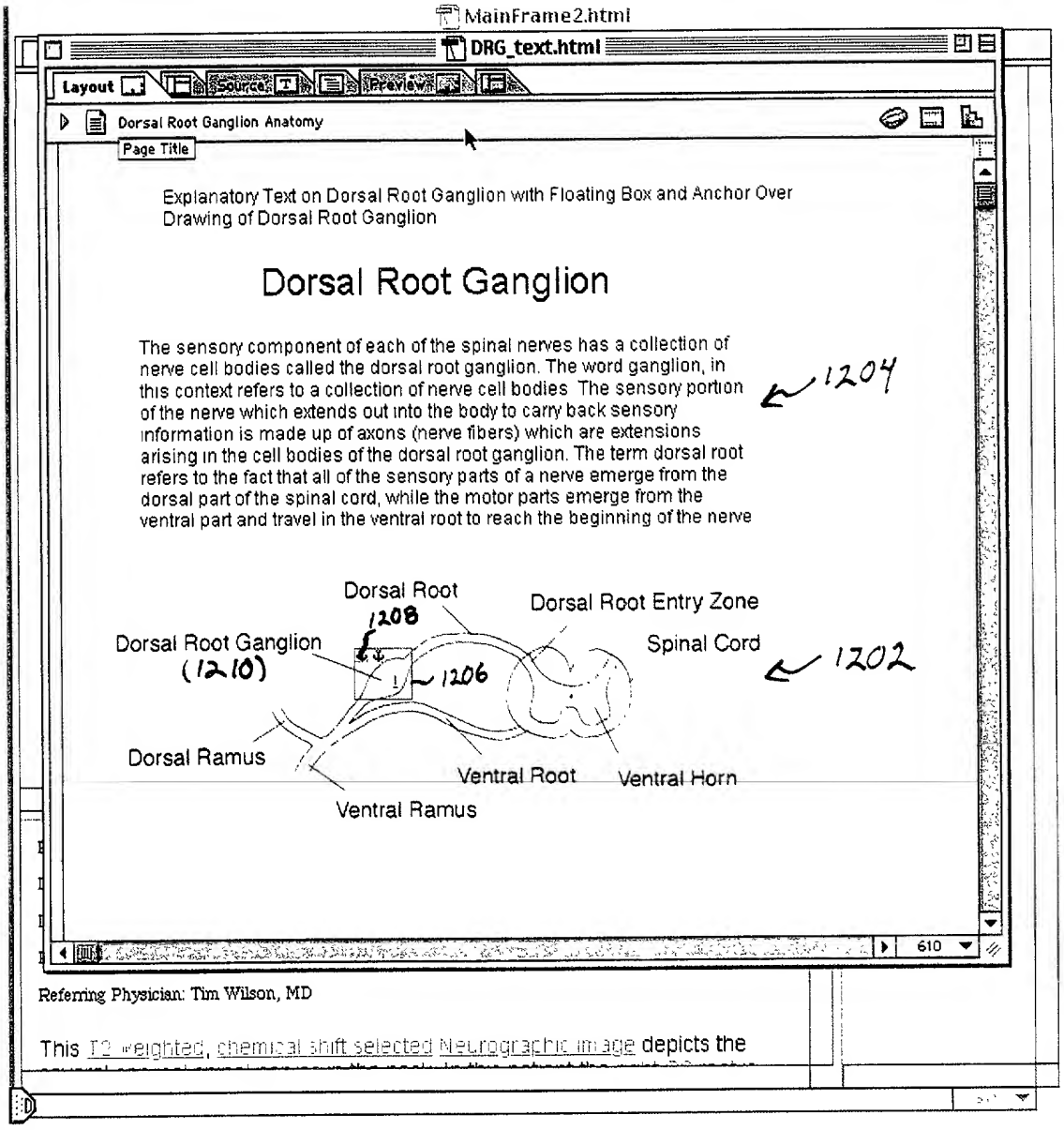
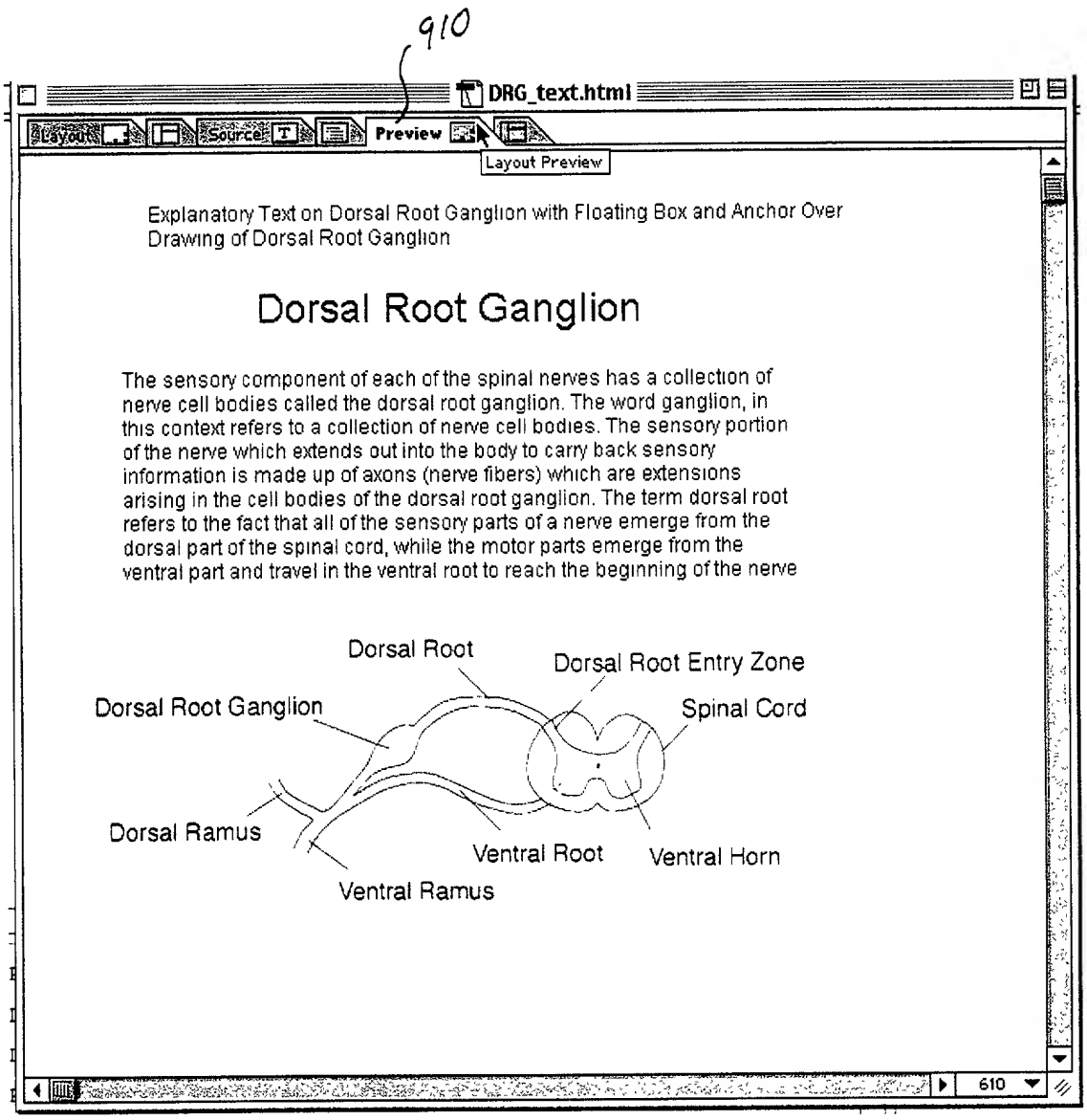


FIGURE 11A



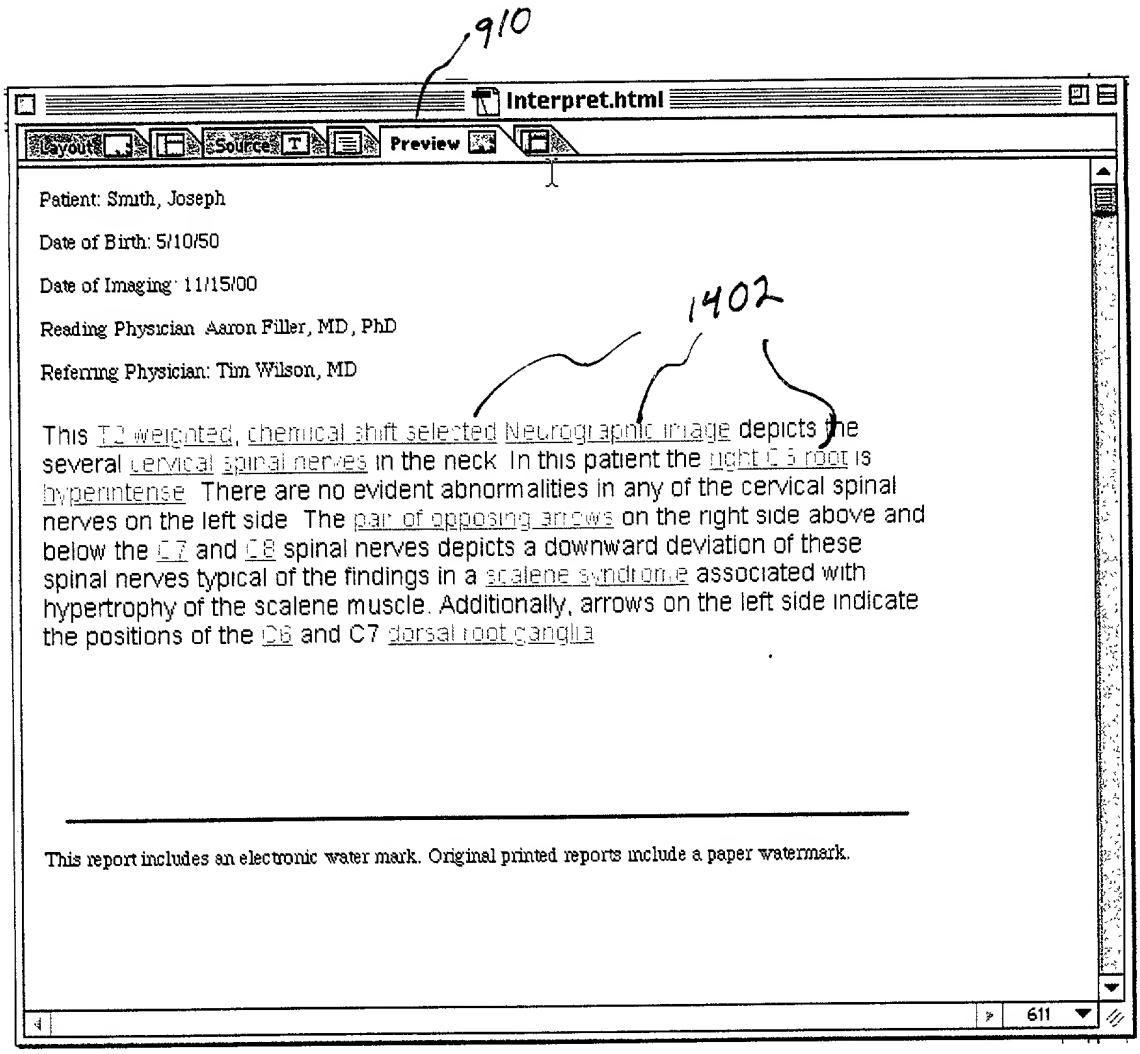
1200

FIGURE 12



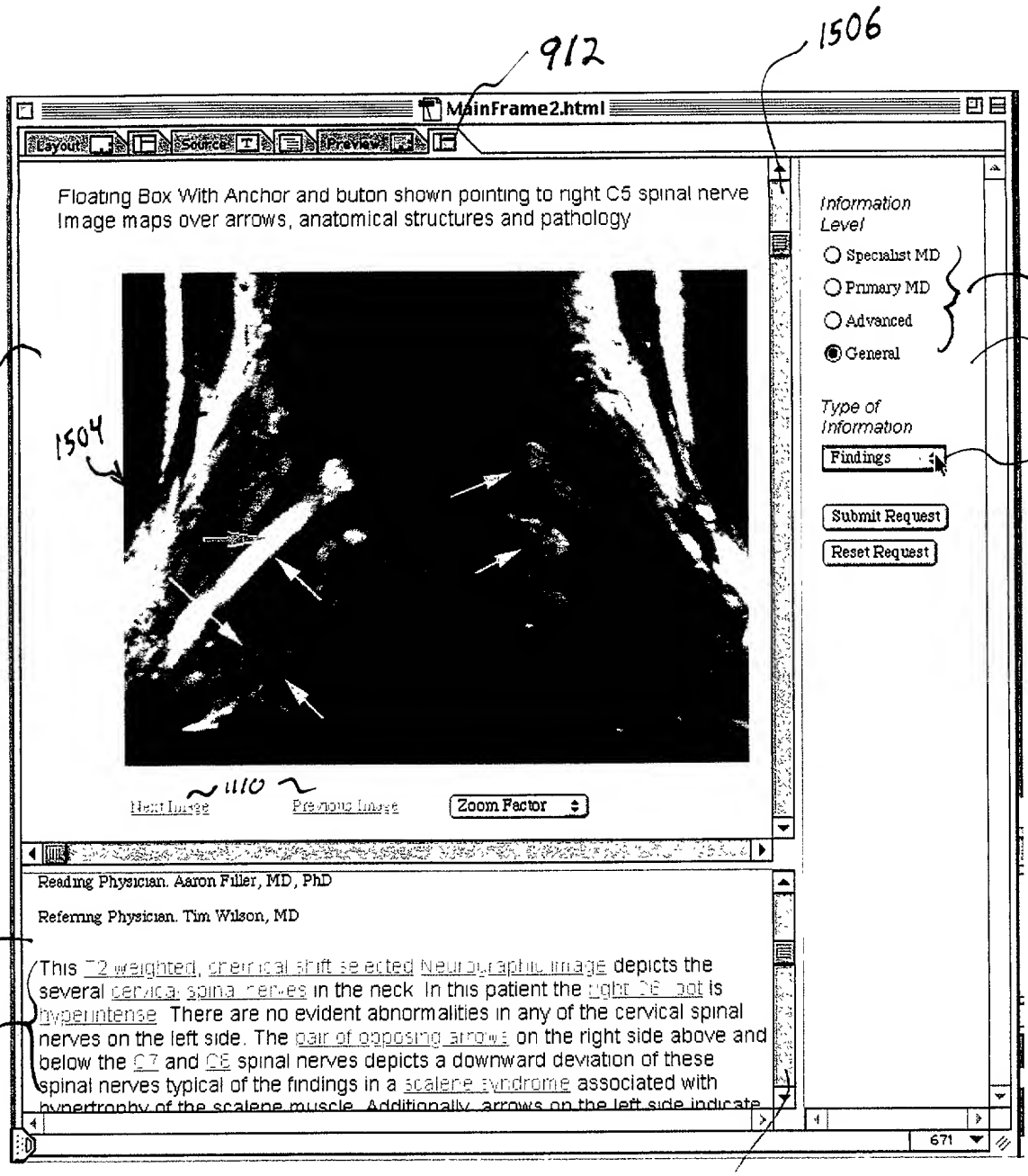
1300

FIGURE 13



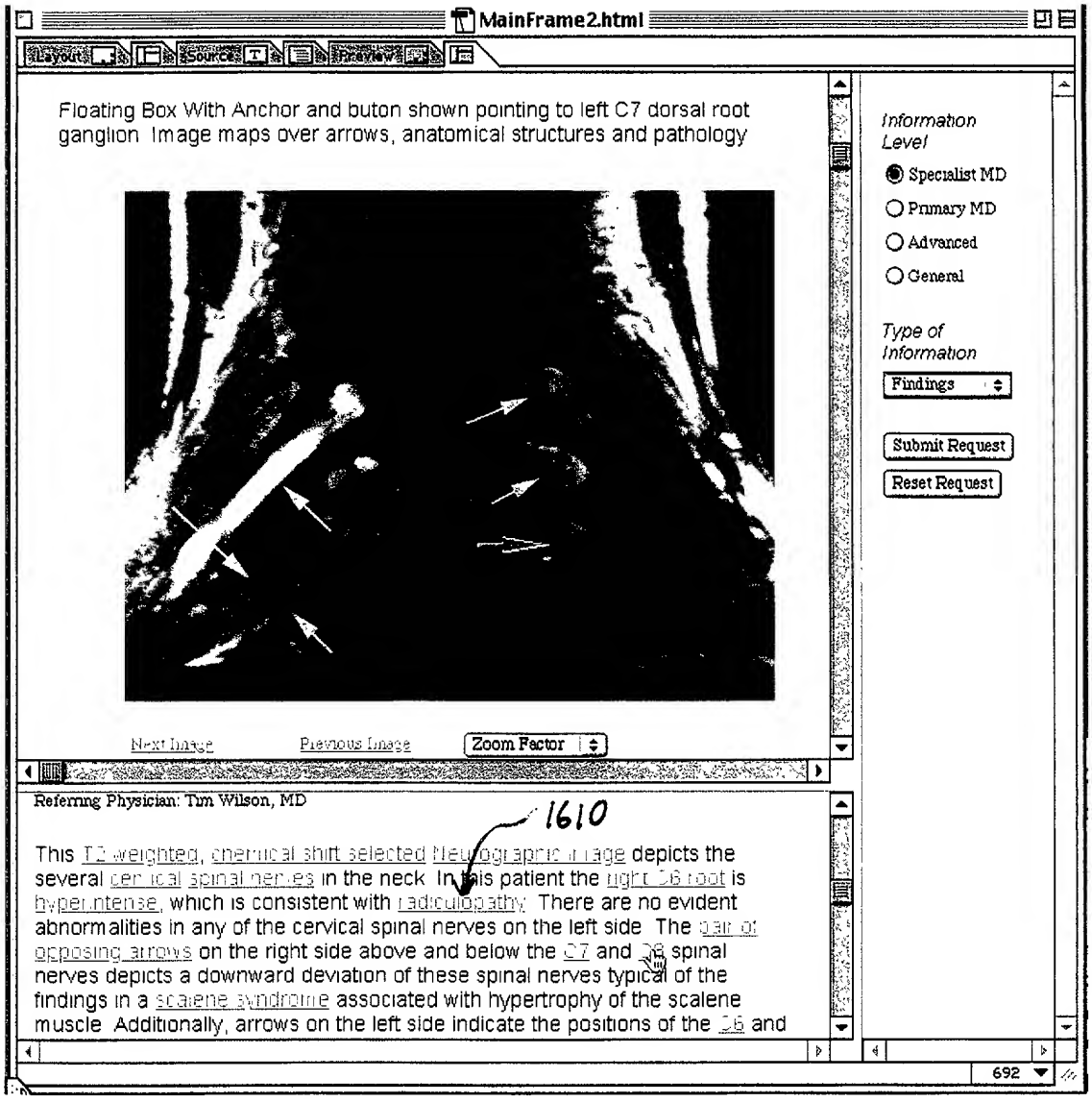
1400

FIGURE 14



1500

FIGURE 15



1600

FIGURE 16

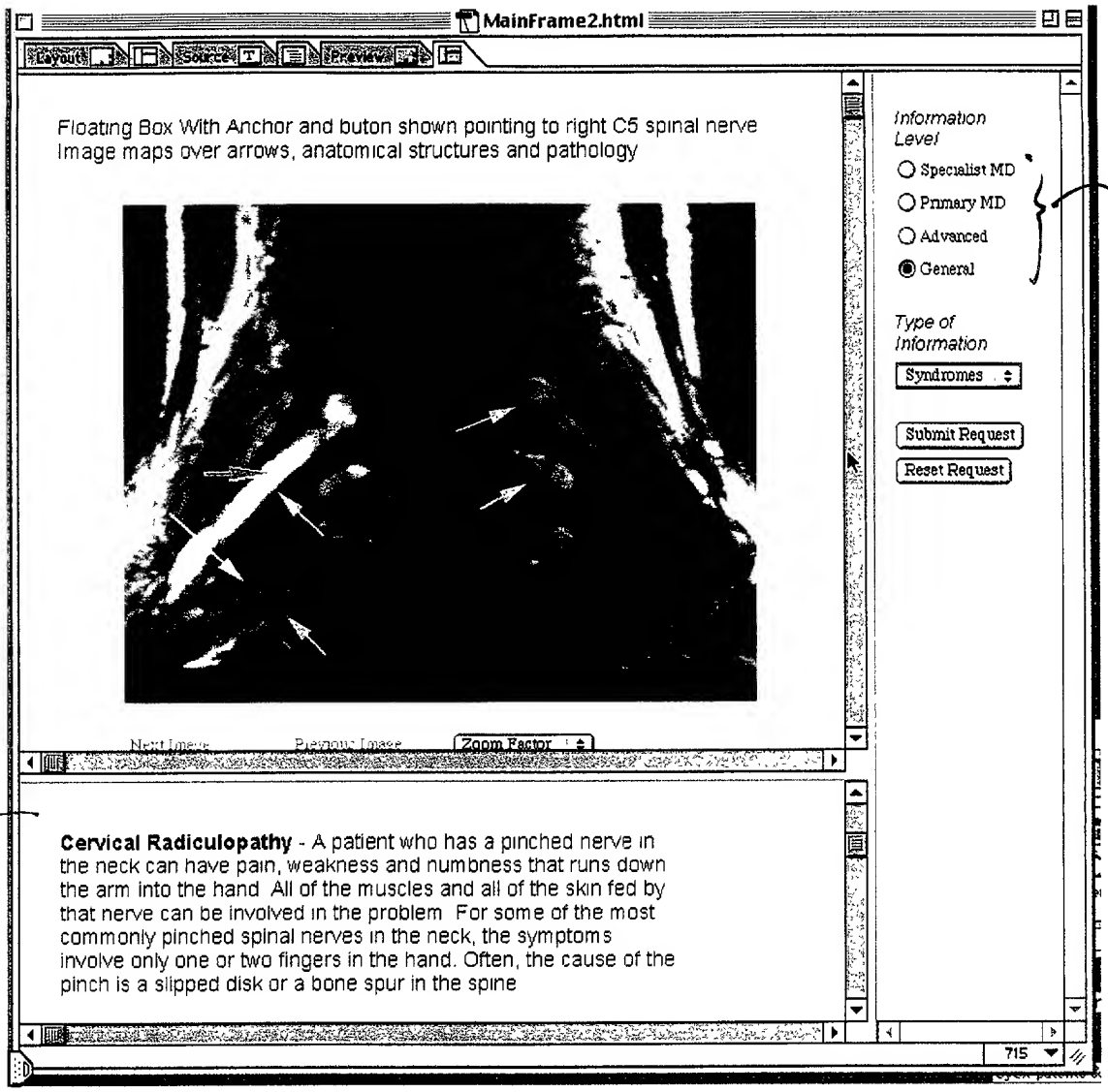
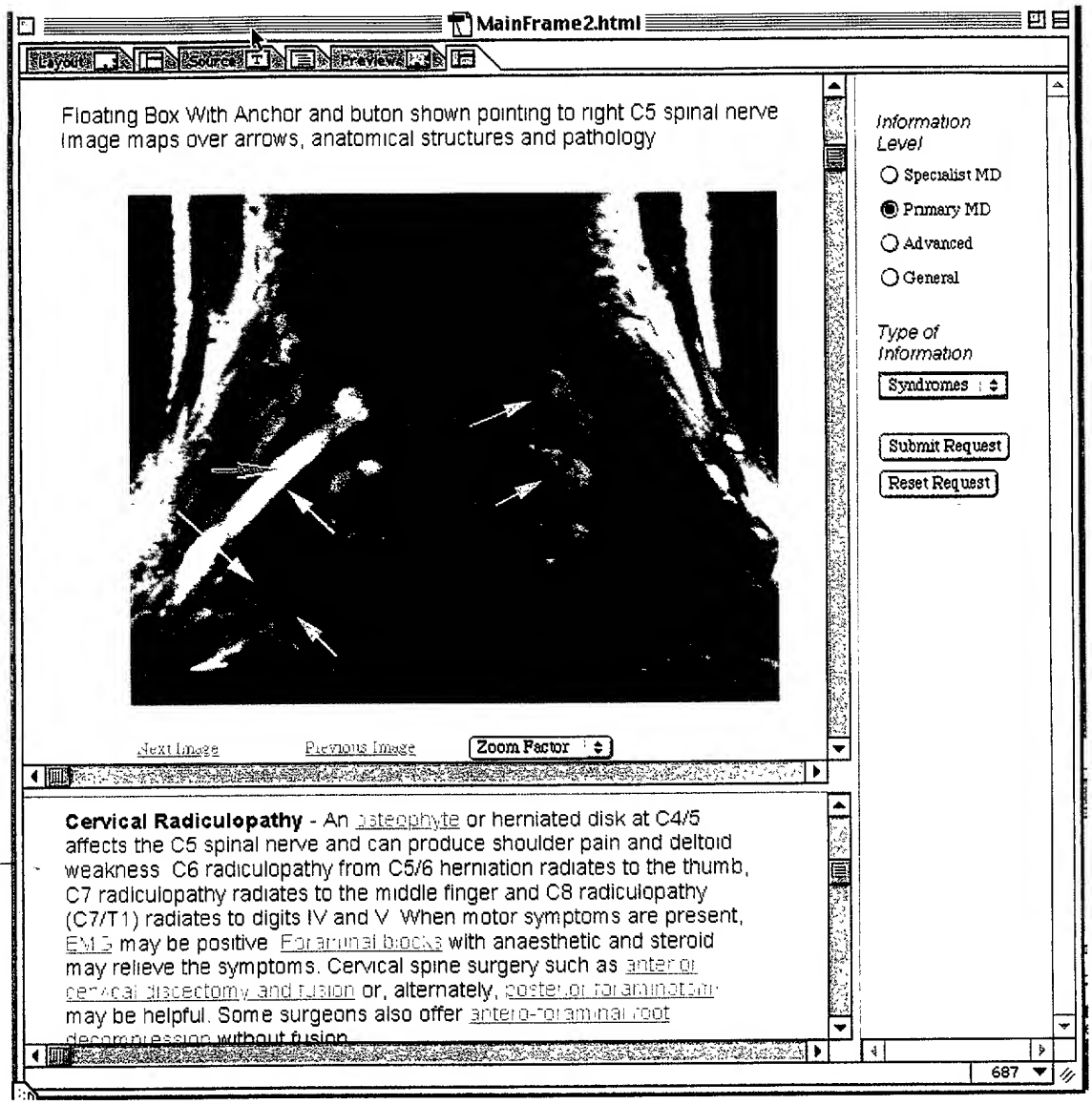

MainFrame2.html
Layout
Source
Preview
Floating Box With Anchor and buton shown pointing to right C5 spinal nerve Image maps over arrows, anatomical structures and pathology
Information Level
Specialist MD
Primary MD
Advanced
General
1532
Type of Information
Syndromes
Submit Request
Reset Request
Next Image
Previous Image
Zoom Factor
1510
Cervical Radiculopathy - A patient who has a pinched nerve in the neck can have pain, weakness and numbness that runs down the arm into the hand All of the muscles and all of the skin fed by that nerve can be involved in the problem For some of the most commonly pinched spinal nerves in the neck, the symptoms involve only one or two fingers in the hand. Often, the cause of the pinch is a slipped disk or a bone spur in the spine
715
1500

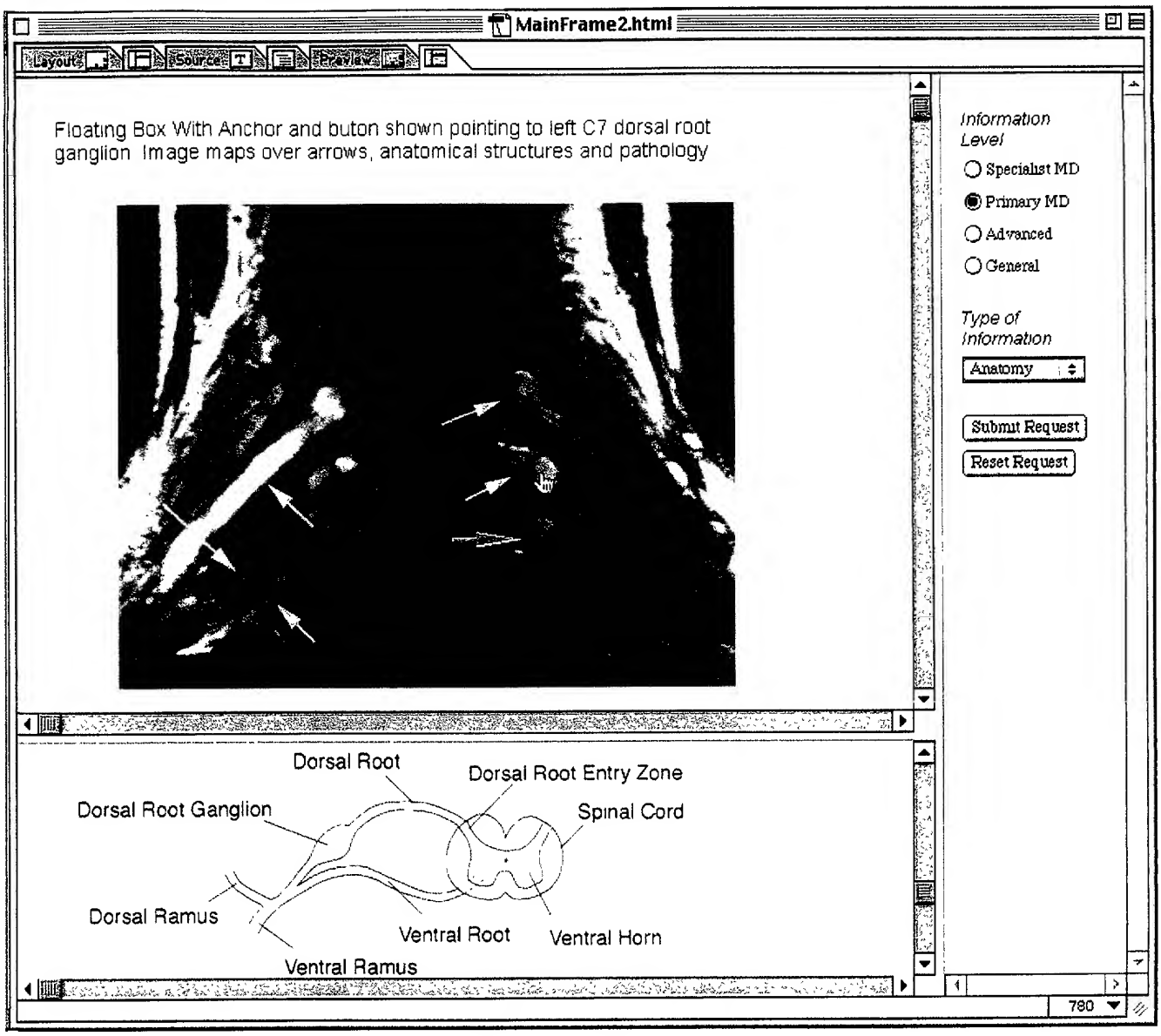
FIGURE 15



1510

1800

FIGURE 18



1900

FIGURE 19

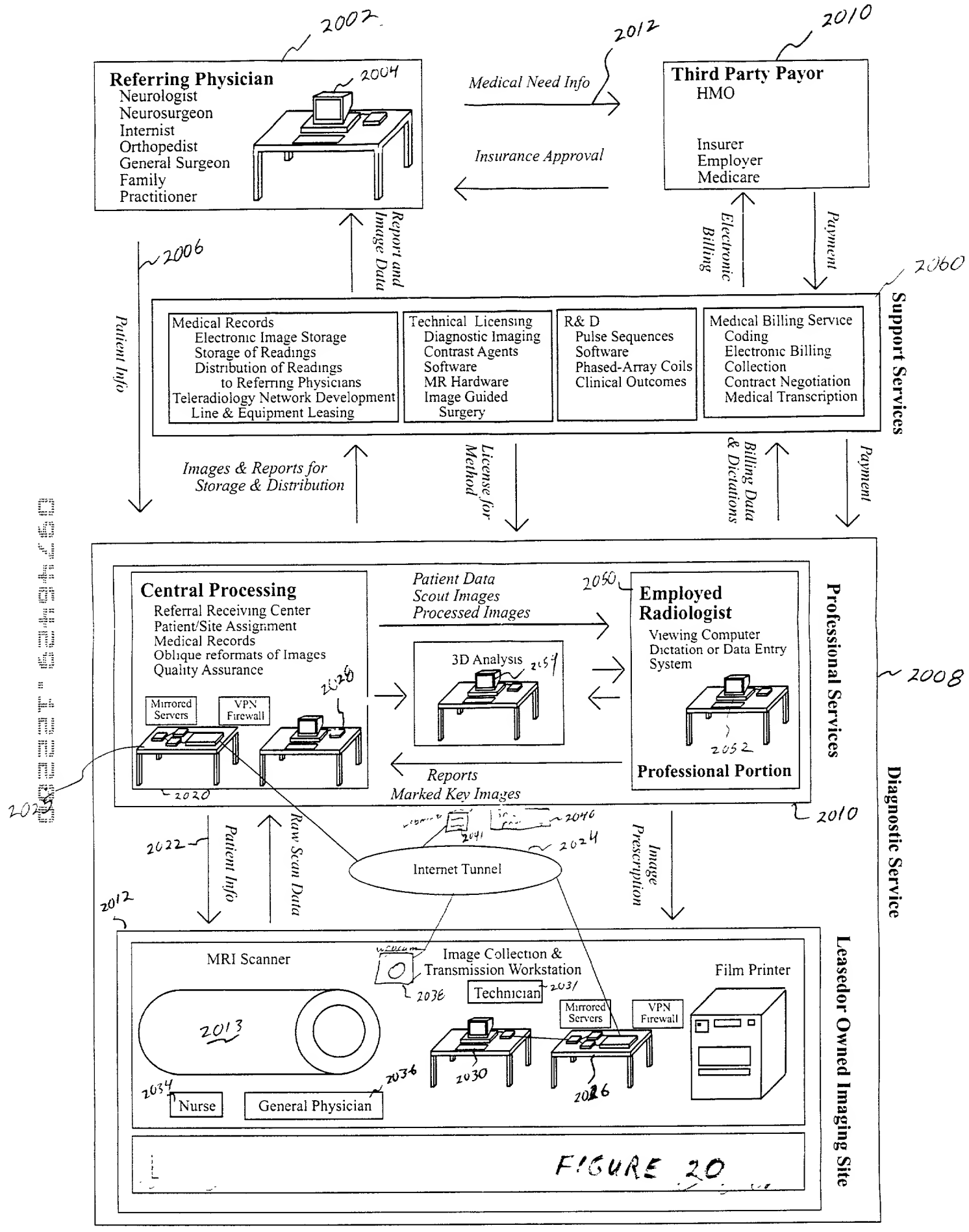

2002
Referring Physician
Neurologist
Neurosurgeon
Internist
Orthopedist
General Surgeon
Family
Practitioner
2004
Medical Need Info
2012
Insurance Approval
2010
Third Party Payor
HMO
Insurer
Employer
Medicare
Report and Image Data
Electronic Billing
Payment
2006
Patient Info
2060
Support Services
Medical Records
Electronic Image Storage
Storage of Readings
Distribution of Readings to Referring Physicians
Teleradiology Network Development
Line & Equipment Leasing
Technical Licensing
Diagnostic Imaging
Contrast Agents
Software
MR Hardware
Image Guided Surgery
R& D
Pulse Sequences
Software
Phased-Array Coils
Clinical Outcomes
Medical Billing Service
Coding
Electronic Billing
Collection
Contract Negotiation
Medical Transcription
Images & Reports for Storage & Distribution
License for Method
Billing Data & Dictations
Payment
2008
Professional Services
Central Processing
Referral Receiving Center
Patient/Site Assignment
Medical Records
Oblique reformats of Images
Quality Assurance
Mirrored Servers
VPN Firewall
2026
2020
Patient Data
Scout Images
Processed Images
3D Analysis
2054
2050
Employed Radiologist
Viewing Computer
Dictation or Data Entry System
2052
Professional Portion
Reports
Marked Key Images
2010
Diagnostic Service
2022
Patient Info
Raw Scan Data
2041
2046
2024
Internet Tunnel
Image Prescription
2012
MRI Scanner
2013
Image Collection & Transmission Workstation
2036
Technician
2031
Mirrored Servers
VPN Firewall
2030
2026
Film Printer
2034
Nurse
2036
General Physician
Leasedor Owned Imaging Site

FIGURE 20